

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A circuit comprising:

a plurality of capacitors coupled in parallel;

a plurality of capacitor switches, each one of the capacitor switches coupled in series with a respective one of the plurality of capacitors;

a plurality of control circuits, each of the plurality of control circuits coupled to a respective one of the plurality of capacitor switches, to generate a respective control voltage, and to independently set a respective one of the plurality of capacitor switches to the respective control voltage;

a plurality of control switches, each of the plurality of control switches to couple and to decouple a respective one of the plurality of control circuits to and from a control signal; and

a plurality of sets of one or more control biasing circuits, each of the plurality of sets of one or more control biasing circuits to set a respective control voltage to one of a reset voltage, a first threshold voltage, and a second threshold voltage.

2. (cancelled)

3. (original) A circuit according to Claim 1, further comprising an oscillating circuit coupled to the plurality of capacitors by the plurality of capacitor switches, an output frequency of the oscillating circuit based at least on a capacitance provided to the oscillating circuit by the plurality of capacitors.

4. (original) A circuit according to Claim 1, further comprising:

a charge pump, the charge pump to sink or source the control signal from or to the plurality of control circuits, each of the plurality of control circuits to generate the respective control voltage based at least in part on the control signal.

5. (original) A circuit according to Claim 4, further comprising:

a detector, the detector to transmit a difference signal to the charge pump, the difference signal to indicate a difference between a reference signal and an output signal, wherein the output signal is based on one or more of the plurality of capacitors, and wherein the charge pump is to generate the control signal based on the difference signal.

6. (original) A circuit according to Claim 5, further comprising:

an oscillating circuit coupled to the plurality of capacitors by the plurality of capacitor switches, the oscillating circuit to output the output signal, wherein the output signal is based at least on a capacitance provided to the oscillating circuit by the plurality of capacitors.

7. (original) A circuit according to Claim 1, wherein if a particular capacitor switch is set to the first threshold voltage, a particular capacitor coupled in series with the particular capacitor switch contributes negligibly to a total capacitance of the plurality of capacitors,

wherein if the particular capacitor switch is set to the second threshold voltage, the particular capacitor coupled in series with the particular capacitor switch contributes substantially its characteristic capacitance to the total capacitance of the plurality of capacitors, and

wherein the reset voltage is greater than the first threshold voltage and less than the second threshold voltage.

8. (previously presented) A circuit according to Claim 1, wherein at least two of the plurality of control circuits are not identical to each other.

9. (previously presented) A circuit according to Claim 8, wherein the at least two of the plurality of control circuits are to generate different control voltages in response to a same control signal.

10. (previously presented) A circuit according to Claim 1, further comprising:

a plurality of charge pumps, each of the plurality of charge pumps coupled to a respective one of the plurality of control switches, and to sink or source a respective control signal from or to a respective one of the plurality of control circuits,

wherein each of the plurality of control circuits to generate the respective control voltage based at least in part on the respective control signal.

11. (previously presented) A circuit according to Claim 10, further comprising a detector, the detector to transmit a difference signal to the plurality of charge pumps, the difference signal to indicate a difference between a reference signal and an output signal, wherein the output signal is based on one or more of the plurality of capacitors, and wherein at least two of the plurality of charge pumps are to generate different control signals based on the difference signal.

12. (currently amended) A method comprising:

setting a plurality of control circuits and a plurality of capacitor switches to a reset voltage;

coupling a first of the plurality of control circuits to a control signal, the first control circuit coupled in series to a first of the plurality of capacitor switches;

determining that a control voltage of the first control circuit is less than a first threshold voltage, wherein the first threshold voltage is less than the reset voltage;

setting the first control circuit to the first threshold voltage; and

uncoupling the first control circuit from the control signal;

coupling a second one of the plurality of control circuits to the control signal;

determining that a control voltage of the second control circuit is greater than a second threshold voltage, wherein the second threshold voltage is greater than the reset voltage;

setting the second control circuit to the second threshold voltage;

uncoupling the second control circuit from the control signal; and

coupling a third one of the plurality of control circuits to the control signal.

13. (previously presented) A method according to Claim 12, wherein each of the capacitor switches is coupled in series to a respective one of a plurality of capacitors, and wherein a capacitor coupled in series to the first capacitor switch contributes negligibly to a total capacitance of the plurality of capacitors if the first control circuit is set to the first threshold voltage.

15. (cancelled)

16. (currently amended) A method according to Claim 4512, wherein setting the second control circuit to the second threshold voltage closes the second capacitor switch.

17. (cancelled)

18. (cancelled)